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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/944,648 | 08/31/2001 | Thomas Edward Dinan | SJO9-2000-0009US1 | 1799 |

32112 7590 06/24/2003

INTELLECTUAL PROPERTY LAW OFFICE
1901 S. BASCOM AVENUE, SUITE 660
CAMPBELL, CA 95008

EXAMINER

CHEN, TIANJIE

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2652

DATE MAILED: 06/24/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

12

Office Action Summary

Application No.

09/944,648

Applicant(s)

DINAN ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

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Non-Final Rejection

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-10 in Paper No. 6 filed 06/05/2003 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honjo et al (US 6,466,416).

With regard to claims 1 and 6, Honjo et al shows a magnetic head (Figs. 3 and 4) including: a substrate 1; a read head 4 being fabricated upon the substrate; a P1 pole 6 being fabricated upon the read head; a write gap layer 7 being fabricated upon the P1 pole; a P2 pole tip 11 being fabricated upon portions of the write gap layer, wherein the P2 pole tip includes a first portion (front portion) being comprised of a magnetic layer material 14 (Fig. 4; column 9, lines 19-22) and a second portion 11 being comprised of electroplated material (Column 9, lines 22-25), and wherein the P2 pole tip has a width dimension W that is formed in part from a thickness of the seed layer material portion and in part from a thickness of the electroplated material portion (Fig. 4).

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With regard to claim 6, Honjo et al further shows the magnetic head is used for a hard disk drive (Column 1, lines 6-7) inheriting at least one hard disk being fabricated for rotary motion upon a disk drive; at least one magnetic head adapted to fly over the hard disk for writing data on the hard disk.

Honjo et al does not name layer 14 as seed layer.

However, it would have been obvious at the time the invention was made to one of ordinary skill in the art to recognize that layer 14 is also a seed layer. The rationale is as follows: Honjo et al teaches that layer 14 is formed by physical vapor deposition (which is not electroplating) (Column 9, lines 62-53) and used for supplying electric current when third layer 11 is formed by electroplating method (Column 9, lines 19-21); therefore, the layer 14 functions as a seed layer. One of ordinary skill in the art would have been motivated by Honjo et al's teaching to recognize layer 14 as a seed layer.

With regard to claims 2 and 7, Honjo et al further shows the first portion of the P2 pole tip that is comprised of the seed layer material 14 forms a sidewall of the P2 pole tip.

With regard to claims 3 and 8, Honjo et al further shows the seed layer material 14 is formed with a thickness of 100 Å (column 12, lines 31-32), which is approximately 50 Å to approximately 500 Å, and the electroplated material 11 is formed with a thickness of 5000 Å (Column 12, lines 43-44).

With regard to claims 4 and 9; Honjo et al further shows the electroplated material 11 having thickness of 1000 Å or more (Column 12, line 51-52), which is approximately 1500 Å; and the seed layer material thickness is more than 50 Å and less 1000 Å (Column 12, lines 33-42), but does not show it is approximately 250 Å.

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However, it would have been obvious at the time the invention was made to one of ordinary skill in the art to include 250 Å as the thickness of the seed layer. The rationale is as follows: Honjo et al teaches that the seed layer material thickness should falls in the range of more then 50 Å and less 1000 Å for balancing the good layer quality and the writing capability (Column 12, lines 33-42). One of ordinary skill in the art would have been motivated by Honjo et al's teaching to find a suitable thickness through experimentation and optimization, which would include 250 Å.

With regard to claims 5 and 10, Honjo et al further shows that the seed layer material 14 is NiFe, which is comprised of NiFe (Column 12, line 31) and the electroplated material 11 is CoNiFe, which is comprised of NiFe (Column 12, line 42-43).

Conclusion

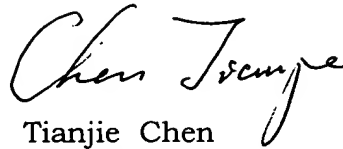
3. The prior art made of record in PTO-92 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-6037 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in cursive script, appearing to read "Chen Tianjie".

Tianjie Chen
Examiner
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June 20, 2003